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## **TEST INFORMATION GUIDE**

This test information guide provides a summary of concepts that are tested on the written (multiple choice) examination for the **Forensic Scientist Trainee (Option C)** job. This information can be reviewed in combination with the class specification and examination announcement to assist you in preparing for the examination.

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### **I. WRITTEN COMMUNICATION SKILLS (10 Questions)**

This section presents questions to test your ability to prepare written reports of analytical findings of examination results. It is crucial that employees submit reports that are well crafted and accurate as they are submitted to various law enforcement agencies for subsequent criminal prosecutions. Test question topics include:

- Identifying correctly spelled words from a group of correctly and incorrectly spelled words;
- Determining which sentence from a group of four represents the best use of grammar and syntax;
- Appropriate use of punctuation in sentences.

### **II. READING COMPREHENSION SKILLS (10 Questions)**

This section tests a critical competency of the job. Employees must be able to read, comprehend and interpret information obtained from books, journals, periodicals and other literature in order to enhance and maintain their knowledge and expertise in various scientific fields. The questions in this examination section test your ability to read and comprehend written information by giving you passages to read and asking you to interpret the information presented in the passage.

### **III. ANALYTICAL PROBLEM SOLVING SKILLS (16 Questions)**

Employees in this job must examine evidence for the purpose of identifying and/or eliminating specific objects by the use of specific examination methods. Employees are also responsible for examining items of evidence utilizing techniques for the purpose of identifying weapons, tools, biological specimens, presence of blood, body fluid, drugs, poisons, etc. The questions in this section test your ability to make logical, factual decisions, draw accurate conclusions and impartially judge the merits of collected evidence. Test question topics include:

- General reasoning ability based on logic;
- Reasoning ability based on supplied data.

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#### **IV. LABORATORY SCIENCE**

**(10 Questions)**

Employees in this job must examine items of evidence utilizing microscopic, chemical and analytical techniques for the purpose of identifying or eliminating potential evidence. Employees are also responsible for the routine maintenance of safety and laboratory equipment and analytical instruments and for performing calibration and safety checks on examination equipment. The questions in this section test your knowledge of common laboratory practices and procedures. Test question topics include:

- Accurate measurement of liquids;
- Chemical characteristics of fluids (pH levels; viscosity; etc.);
- Characteristics of light and wavelengths;
- Using laboratory measurements such as milligrams, kilograms, etc.

#### **V. FORENSIC BIOLOGY**

**(34 Questions)**

Employees in this job are expected to gain competency needed to develop biological and/or DNA tests on blood and bodily fluids, identify various enzymes and the chemical composition of blood stains in one or more typing system, as well as utilize biology and genetic marker indexing systems. These competencies require the employee to know and apply the basic principles of forensic biology. This final section of the exam presents questions to test your command of basic forensic biology knowledge and principles. Test question topics include:

- Characteristics of DNA and RNA;
- Characteristics of chromosomes and genes;
- Understanding the process of mitosis and meiosis;
- Definitions of common forensic biology terms (homozygous; genotype; nucleotides; helix; etc.)
- Practical application of the Hardy-Weinberg Law;
- Characteristics of blood and blood cells.